

## SEQUENCE LISTING

<110> Immusol Inc.  
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 Ke, Ning  
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<120> METHODS OF IDENTIFYING AGENTS THAT INHIBIT THE GROWTH OF CANCER CELLS

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 <213> Homo sapiens

<400> 7

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Asp Lys Leu Glu Thr Met Pro Leu Tyr Leu Glu Asp Asp Ile Arg Pro  
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Asp Ile Lys Asp Asp Ile Tyr Asp Pro Thr Tyr Lys Asp Lys Glu Gly  
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Pro Ser Pro Lys Val Glu Tyr Val Trp Arg Asn Ile Ile Leu Met Ser  
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Leu Leu His Leu Gly Ala Leu Tyr Gly Ile Thr Leu Ile Pro Thr Cys  
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Lys Phe Tyr Thr Trp Leu Trp Gly Val Phe Tyr Tyr Phe Val Ser Ala  
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Leu Gly Ile Thr Ala Gly Ala His Arg Leu Trp Ser His Arg Ser Tyr  
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Lys Ala Arg Leu Pro Leu Arg Leu Phe Leu Ile Ile Ala Asn Thr Met  
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Ala Phe Gln Asn Asp Val Tyr Glu Trp Ala Arg Asp His Arg Ala His  
 145 150 155 160

His Lys Phe Ser Glu Thr His Ala Asp Pro His Asn Ser Arg Arg Gly  
 165 170 175

Phe Phe Phe Ser His Val Gly Trp Leu Leu Val Arg Lys His Pro Ala  
 180 185 190

Val Lys Glu Lys Gly Ser Thr Leu Asp Leu Ser Asp Leu Glu Ala Glu  
 195 200 205

Lys Leu Val Met Phe Gln Arg Arg Tyr Tyr Lys Pro Gly Leu Leu Leu  
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Met Cys Phe Ile Leu Pro Thr Leu Val Pro Trp Tyr Phe Trp Gly Glu  
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Thr Phe Gln Asn Ser Val Phe Val Ala Thr Phe Leu Arg Tyr Ala Val  
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Val Leu Asn Ala Thr Trp Leu Val Asn Ser Ala Ala His Leu Phe Gly  
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Tyr Arg Pro Tyr Asp Lys Asn Ile Ser Pro Arg Glu Asn Ile Leu Val  
275 280 285

Ser Leu Gly Ala Val Gly Glu Gly Phe His Asn Tyr His His Ser Phe  
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Pro Tyr Asp Tyr Ser Ala Ser Glu Tyr Arg Trp His Ile Asn Phe Thr  
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Thr Phe Phe Ile Asp Cys Met Ala Ala Leu Gly Leu Ala Tyr Asp Arg  
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Lys Lys Val Ser Lys Ala Ala Ile Leu Ala Arg Ile Lys Arg Thr Gly  
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Asp Gly Asn Tyr Lys Ser Gly  
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Ser Cys Gly Gly Leu Leu Gln Ser Pro Ile Asp Leu His Ser Asp Ile  
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Ile Leu Ser Leu Ala Leu Ala Gly Ile Leu Gly Ile Cys Ile Val Val  
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Val Val Ser Ile Trp Leu Phe Arg Arg Lys Ser Ile Lys Lys Gly Asp  
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Asn Lys Gly Val Ile Tyr Lys Pro Ala Thr Lys Met Glu Thr Glu Ala  
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His Ala

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<400> 9

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Gly Ser Thr Arg Phe Phe Lys Val Ala Arg Ala Lys His Arg Glu Gly  
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Leu Val Val Val Lys Val Phe Ala Ile Gln Asp Pro Thr Leu Pro Leu  
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Thr Ser Tyr Lys Gln Glu Leu Glu Glu Leu Lys Ile Arg Leu Asn Ser  
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Ala Gln Asn Cys Leu Pro Phe Gln Lys Ala Ser Glu Lys Ala Ser Glu  
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Lys Ala Ala Met Leu Phe Arg Gln Tyr Val Arg Asp Asn Leu Tyr Asp  
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Arg Ile Ser Thr Arg Pro Phe Leu Asn Asn Ile Glu Lys Arg Trp Ile  
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Ala Phe Gln Ile Leu Thr Ala Val Asp Gln Ala His Lys Ser Gly Val  
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Arg His Gly Asp Ile Lys Thr Glu Asn Val Met Val Thr Ser Trp Asn  
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Trp Val Leu Leu Thr Asp Phe Ala Ser Phe Lys Pro Thr Tyr Leu Pro  
 165 170 175

Glu Asp Asn Pro Ala Asp Phe Asn Tyr Phe Phe Asp Thr Ser Arg Arg  
 180 185 190

Arg Thr Cys Tyr Ile Ala Pro Glu Arg Phe Val Asp Gly Gly Met Phe  
 195 200 205

Ala Thr Glu Leu Glu Tyr Met Arg Asp Pro Ser Thr Pro Leu Val Asp  
 210 215 220

Leu Asn Ser Asn Gln Arg Thr Arg Gly Glu Leu Lys Arg Ala Met Asp  
 225 230 235 240

Ile Phe Ser Ala Gly Cys Val Ile Ala Glu Leu Phe Thr Glu Gly Val  
 245 250 255

Pro Leu Phe Asp Leu Ser Gln Leu Leu Ala Tyr Arg Asn Gly His Phe  
 260 265 270

Phe Pro Glu Gln Val Leu Asn Lys Ile Glu Asp His Ser Ile Arg Glu  
 275 280 285

Leu Val Thr Gln Met Ile His Arg Glu Pro Asp Lys Arg Leu Glu Ala  
 290 295 300

Glu Asp Tyr Leu Lys Gln Gln Arg Gly Asn Ala Phe Pro Glu Ile Phe  
 305 310 315 320

Tyr Thr Phe Leu Gln Pro Tyr Met Ala Gln Phe Ala Lys Glu Thr Phe  
 325 330 335

Leu Ser Ala Asp Glu Arg Ile Leu Val Ile Arg Lys Asp Leu Gly Asn  
 340 345 350

Ile Ile His Asn Leu Cys Gly His Asp Leu Pro Glu Lys Ala Glu Gly  
 355 360 365

Glu Pro Lys Glu Asn Gly Leu Val Ile Leu Val Ser Val Ile Thr Ser  
 370 375 380

Cys Leu Gln Thr Leu Lys Tyr Cys Asp Ser Lys Leu Ala Ala Leu Glu  
 385 390 395 400

Leu Ile Leu His Leu Ala Pro Arg Leu Ser Val Glu Ile Leu Leu Asp  
 405 410 415

Arg Ile Thr Pro Tyr Leu Leu His Phe Ser Asn Asp Ser Val Pro Arg  
 420 425 430

Val Arg Ala Glu Ala Leu Arg Thr Leu Thr Lys Val Leu Ala Leu Val  
 435 440 445

Lys Glu Val Pro Arg Asn Asp Ile Asn Ile Tyr Pro Glu Tyr Ile Leu  
 450 455 460

Pro Gly Ile Ala His Leu Ala Gln Asp Asp Ala Thr Ile Val Arg Leu  
 465 470 475 480

Ala Tyr Ala Glu Asn Ile Ala Leu Leu Ala Glu Thr Ala Leu Arg Phe  
 485 490 495

Leu Glu Leu Val Gln Leu Lys Asn Leu Asn Met Glu Asn Asp Pro Asn  
 500 505 510

Asn Glu Glu Ile Asp Glu Val Thr His Pro Asn Gly Asn Tyr Asp Thr  
 515 520 525

Glu Leu Gln Ala Leu His Glu Met Val Gln Gln Lys Val Val Thr Leu  
 530 535 540

Leu Ser Asp Pro Glu Asn Ile Val Lys Gln Thr Leu Met Glu Asn Gly  
 545 550 555 560

Ile Thr Arg Leu Cys Val Phe Phe Gly Arg Gln Lys Ala Asn Asp Val  
 565 570 575

Leu Leu Ser His Met Ile Thr Phe Leu Asn Asp Lys Asn Asp Trp His  
 580 585 590

Leu Arg Gly Ala Phe Phe Asp Ser Ile Val Gly Val Ala Ala Tyr Val  
 595 600 605

Gly Trp Gln Ser Ser Ser Ile Leu Lys Pro Leu Leu Gln Gln Gly Leu  
 610 615 620

Ser Asp Ala Glu Glu Phe Val Ile Val Lys Ala Leu Tyr Ala Leu Thr  
 625 630 635 640

Cys Met Cys Gln Leu Gly Leu Leu Gln Lys Pro His Val Tyr Glu Phe  
 645 650 655

Ala Ser Asp Ile Ala Pro Phe Leu Cys His Pro Asn Leu Trp Ile Arg  
 660 665 670

Tyr Gly Ala Val Gly Phe Ile Thr Val Val Ala Arg Gln Ile Ser Thr  
 675 680 685

Ala Asp Val Tyr Cys Lys Leu Met Pro Tyr Leu Asp Pro Tyr Ile Thr  
 690 695 700

Gln Pro Ile Ile Gln Ile Glu Arg Lys Leu Val Leu Leu Ser Val Leu  
 705 710 715 720

Lys Glu Pro Val Ser Arg Ser Ile Phe Asp Tyr Ala Leu Arg Ser Lys  
 725 730 735

Asp Ile Thr Ser Leu Phe Arg His Leu His Met Arg Gln Lys Lys Arg  
 740 745 750

Asn Gly Ser Leu Pro Asp Cys Pro Pro Pro Glu Asp Pro Ala Ile Ala  
 755 760 765

Gln Leu Leu Lys Lys Leu Leu Ser Gln Gly Met Thr Glu Glu Glu Glu  
 770 775 780

Asp Lys Leu Leu Ala Leu Lys Asp Phe Met Met Lys Ser Asn Lys Ala  
 785 790 795 800

Lys Ala Asn Ile Val Asp Gln Ser His Leu His Asp Ser Ser Gln Lys  
 805 810 815

Gly Val Ile Asp Leu Ala Ala Leu Gly Ile Thr Gly Arg Gln Val Asp  
 820 825 830

Leu Val Lys Thr Lys Gln Glu Pro Asp Asp Lys Arg Ala Arg Lys His  
 835 840 845

Val Lys Gln Asp Ser Asn Val Asn Glu Glu Trp Lys Ser Met Phe Gly  
 850 855 860

Ser Leu Asp Pro Pro Asn Met Pro Gln Ala Leu Pro Lys Gly Ser Asp  
 865 870 875 880

Gln Glu Val Ile Gln Thr Gly Lys Pro Pro Arg Ser Glu Ser Ser Ala  
 885 890 895

Gly Ile Cys Val Pro Leu Ser Thr Ser Ser Gln Val Pro Glu Val Thr  
 900 905 910

Thr Val Gln Asn Lys Lys Pro Val Ile Pro Val Leu Ser Ser Thr Ile  
 915 920 925

Leu Pro Ser Thr Tyr Gln Ile Arg Ile Thr Thr Cys Lys Thr Glu Leu  
 930 935 940

Gln Gln Leu Ile Gln Gln Lys Arg Glu Gln Cys Asn Ala Glu Arg Ile  
 945 950 955 960

Ala Lys Gln Met Met Glu Asn Ala Glu Trp Glu Ser Lys Pro Pro Pro  
 965 970 975

Pro Gly Trp Arg Pro Lys Gly Leu Leu Val Ala His Leu His Glu His  
 980 985 990

Lys Ser Ala Val Asn Arg Ile Arg Val Ser Asp Glu His Ser Leu Phe  
 995 1000 1005

Ala Thr Cys Ser Asn Asp Gly Thr Val Lys Ile Trp Asn Ser Gln  
 1010 1015 1020

Lys Met Glu Gly Lys Thr Thr Thr Thr Arg Ser Ile Leu Thr Tyr  
 1025 1030 1035

Ser Arg Ile Gly Gly Arg Val Lys Thr Leu Thr Phe Cys Gln Gly  
 1040 1045 1050

Ser His Tyr Leu Ala Ile Ala Ser Asp Asn Gly Ala Val Gln Leu  
 1055 1060 1065

Leu Gly Ile Glu Ala Ser Lys Leu Pro Lys Ser Pro Lys Ile His  
 1070 1075 1080

Pro Leu Gln Ser Arg Ile Leu Asp Gln Lys Glu Asp Gly Cys Val  
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Val Asp 1100	Met His His Phe Asn 1105	Ser Gly Ala Gln Ser 1110	Val Leu Ala
Tyr Ala 1115	Thr Val Asn Gly Ser 1120	Leu Val Gly Trp Asp 1125	Leu Arg Ser
Ser Ser 1130	Asn Ala Trp Thr Leu 1135	Lys His Asp Leu Lys 1140	Ser Gly Leu
Ile Thr 1145	Ser Phe Ala Val Asp 1150	Ile His Gln Cys Trp 1155	Leu Cys Ile
Gly Thr 1160	Ser Ser Gly Thr Met 1165	Ala Cys Trp Asp Met 1170	Arg Phe Gln
Leu Pro 1175	Ile Ser Ser His Cys 1180	His Pro Ser Arg Ala 1185	Arg Ile Arg
Arg Leu 1190	Ser Met His Pro Leu 1195	Tyr Gln Ser Trp Val 1200	Ile Ala Ala
Val Gln 1205	Gly Asn Asn Glu Val 1210	Ser Met Trp Asp Met 1215	Glu Thr Gly
Asp Arg 1220	Arg Phe Thr Leu Trp 1225	Ala Ser Ser Ala Pro 1230	Pro Leu Ser
Glu Leu 1235	Gln Pro Ser Pro His 1240	Ser Val His Gly Ile 1245	Tyr Cys Ser
Pro Ala 1250	Asp Gly Asn Pro Ile 1255	Leu Leu Thr Ala Gly 1260	Ser Asp Met
Lys Ile 1265	Arg Phe Trp Asp Leu 1270	Ala Tyr Pro Glu Arg 1275	Ser Tyr Val
Val Ala 1280	Gly Ser Thr Ser Ser 1285	Pro Ser Val Ser Tyr 1290	Tyr Arg Lys
Ile Ile 1295	Glu Gly Thr Glu Val 1300	Val Gln Glu Ile Gln 1305	Asn Lys Gln
Lys Val 1310	Gly Pro Ser Asp Asp 1315	Thr Pro Arg Arg Gly 1320	Pro Glu Ser

Leu Pro Val Gly His His Asp Ile Ile Thr Asp Val Ala Thr Phe  
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Gln Thr Thr Gln Gly Phe Ile Val Thr Ala Ser Arg Asp Gly Ile  
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Val Lys Val Trp Lys  
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<400> 10

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Pro Asn Gln Arg Pro Ala Pro Cys Tyr Asp Pro Cys Glu Ala Val Leu  
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Val Glu Ser Ile Pro Glu Gly Leu Asp Phe Pro Asn Ala Ser Thr Gly  
 35 40 45

Asn Pro Ser Thr Ser Gln Ala Trp Leu Gly Leu Leu Ala Gly Ala His  
 50 55 60

Ser Ser Leu Asp Ile Ala Ser Phe Tyr Trp Thr Leu Thr Asn Asn Asp  
 65 70 75 80

Thr His Thr Gln Glu Pro Ser Ala Gln Gln Gly Glu Glu Val Leu Arg  
 85 90 95

Gln Leu Gln Thr Leu Ala Pro Lys Gly Val Asn Val Arg Ile Ala Val  
 100 105 110

Ser Lys Pro Ser Gly Pro Gln Pro Gln Ala Asp Leu Gln Ala Leu Leu  
 115 120 125

Gln Ser Gly Ala Gln Val Arg Met Val Asp Met Gln Lys Leu Thr His  
 130 135 140

Gly Val Leu His Thr Lys Phe Trp Val Val Asp Gln Thr His Phe Tyr  
 145 150 155 160

Leu Gly Ser Ala Asn Met Asp Trp Arg Ser Leu Thr Gln Val Lys Glu

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Leu	Gly	Val	Val	Met	Tyr	Asn	Cys	Ser	Cys	Leu	Ala	Arg	Asp	Leu	Thr
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Lys	Ile	Phe	Glu	Ala	Tyr	Trp	Phe	Leu	Gly	Gln	Ala	Gly	Ser	Ser	Ile
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Pro	Ser	Thr	Trp	Pro	Arg	Phe	Tyr	Asp	Thr	Arg	Tyr	Asn	Gln	Glu	Thr
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Pro	Met	Glu	Ile	Cys	Leu	Asn	Gly	Thr	Pro	Ala	Leu	Ala	Tyr	Leu	Ala
225					230					235					240
Ser	Ala	Pro	Pro	Pro	Leu	Cys	Pro	Ser	Gly	Arg	Thr	Pro	Asp	Leu	Lys
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Ala	Leu	Leu	Asn	Val	Val	Asp	Asn	Ala	Arg	Ser	Phe	Ile	Tyr	Val	Ala
			260					265					270		
Val	Met	Asn	Tyr	Leu	Pro	Thr	Leu	Glu	Phe	Ser	His	Pro	His	Arg	Phe
		275					280					285			
Trp	Pro	Ala	Ile	Asp	Asp	Gly	Leu	Arg	Arg	Ala	Thr	Tyr	Glu	Arg	Gly
	290					295					300				
Val	Lys	Val	Arg	Leu	Leu	Ile	Ser	Cys	Trp	Gly	His	Ser	Glu	Pro	Ser
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Met	Arg	Ala	Phe	Leu	Leu	Ser	Leu	Ala	Ala	Leu	Arg	Asp	Asn	His	Thr
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His	Ser	Asp	Ile	Gln	Val	Lys	Leu	Phe	Val	Val	Pro	Ala	Asp	Glu	Ala
			340					345					350		
Gln	Ala	Arg	Ile	Pro	Tyr	Ala	Arg	Val	Asn	His	Asn	Lys	Tyr	Met	Val
		355					360					365			
Thr	Glu	Arg	Ala	Thr	Tyr	Ile	Gly	Thr	Ser	Asn	Trp	Ser	Gly	Asn	Tyr
	370					375					380				
Phe	Thr	Glu	Thr	Ala	Gly	Thr	Ser	Leu	Leu	Val	Thr	Gln	Asn	Gly	Arg
385					390					395					400
Gly	Gly	Leu	Arg	Ser	Gln	Leu	Glu	Ala	Ile	Phe	Leu	Arg	Asp	Trp	Asp



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Ser	Pro	Tyr	Ile	His	Asp	Leu	Asp	Thr	Ser	Ala	Asp	Ser	Val	Gly	Asn
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Ala	Cys	Arg	Leu	Leu											
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<212>	PRT														
<213>	Homo sapiens														
<400>	11														
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Gly	Ala	Asp	Ala	Arg	Ala	Leu	Met	Leu	Gln	Gly	Val	Asp	Leu	Leu	Ala
		35					40					45			
Asp	Ala	Val	Ala	Val	Thr	Met	Gly	Pro	Lys	Gly	Arg	Thr	Val	Ile	Ile
	50					55					60				
Glu	Gln	Ser	Trp	Gly	Ser	Pro	Lys	Val	Thr	Lys	Asp	Gly	Val	Thr	Val
65					70					75					80
Ala	Lys	Ser	Ile	Asp	Leu	Lys	Asp	Lys	Tyr	Lys	Asn	Ile	Gly	Ala	Lys
				85					90					95	
Leu	Val	Gln	Asp	Val	Ala	Asn	Asn	Thr	Asn	Glu	Glu	Ala	Gly	Asp	Gly
			100					105					110		
Thr	Thr	Thr	Ala	Thr	Val	Leu	Ala	Arg	Ser	Ile	Ala	Lys	Glu	Gly	Phe
			115				120					125			
Glu	Lys	Ile	Ser	Lys	Gly	Ala	Asn	Pro	Val	Glu	Ile	Arg	Arg	Gly	Val
	130					135					140				
Met	Leu	Ala	Val	Asp	Ala	Val	Ile	Ala	Glu	Leu	Lys	Lys	Gln	Ser	Lys
145					150					155					160
Pro	Val	Thr	Thr	Pro	Glu	Glu	Ile	Ala	Gln	Val	Ala	Thr	Ile	Ser	Ala
				165					170					175	

Asn Gly Asp Lys Glu Ile Gly Asn Ile Ile Ser Asp Ala Met Lys Lys  
 180 185 190

Val Gly Arg Lys Gly Val Ile Thr Val Lys Asp Gly Lys Thr Leu Asn  
 195 200 205

Asp Glu Leu Glu Ile Ile Glu Gly Met Lys Phe Asp Arg Gly Tyr Ile  
 210 215 220

Ser Pro Tyr Phe Ile Asn Thr Ser Lys Gly Gln Lys Cys Glu Phe Gln  
 225 230 235 240

Asp Ala Tyr Val Leu Leu Ser Glu Lys Lys Ile Ser Ser Ile Gln Ser  
 245 250 255

Ile Val Pro Ala Leu Glu Ile Ala Asn Ala His Arg Lys Pro Leu Val  
 260 265 270

Ile Ile Ala Glu Asp Val Asp Gly Glu Ala Leu Ser Thr Leu Val Leu  
 275 280 285

Asn Arg Leu Lys Val Gly Leu Gln Val Val Ala Val Lys Ala Pro Gly  
 290 295 300

Phe Gly Asp Asn Arg Lys Asn Gln Leu Lys Asp Met Ala Ile Ala Thr  
 305 310 315 320

Gly Gly Ala Val Phe Gly Glu Glu Gly Leu Thr Leu Asn Leu Glu Asp  
 325 330 335

Val Gln Pro His Asp Leu Gly Lys Val Gly Glu Val Ile Val Thr Lys  
 340 345 350

Asp Asp Ala Met Leu Leu Lys Gly Lys Gly Asp Lys Ala Gln Ile Glu  
 355 360 365

Lys Arg Ile Gln Glu Ile Ile Glu Gln Leu Asp Val Thr Thr Ser Glu  
 370 375 380

Tyr Glu Lys Glu Lys Leu Asn Glu Arg Leu Ala Lys Leu Ser Asp Gly  
 385 390 395 400

Val Ala Val Leu Lys Val Gly Gly Thr Ser Asp Val Glu Val Asn Glu  
 405 410 415

Lys Lys Asp Arg Val Thr Asp Ala Leu Asn Ala Thr Arg Ala Ala Val  
420 425 430

Glu Glu Gly Ile Val Leu Gly Gly Gly Cys Ala Leu Leu Arg Cys Ile  
435 440 445

Pro Ala Leu Asp Ser Leu Thr Pro Ala Asn Glu Asp Gln Lys Ile Gly  
450 455 460

Ile Glu Ile Ile Lys Arg Thr Leu Lys Ile Pro Ala Met Thr Ile Ala  
465 470 475 480

Lys Asn Ala Gly Val Glu Gly Ser Leu Ile Val Glu Lys Ile Met Gln  
485 490 495

Ser Ser Ser Glu Val Gly Tyr Asp Ala Met Ala Gly Asp Phe Val Asn  
500 505 510

Met Val Glu Lys Gly Ile Ile Asp Pro Thr Lys Val Val Arg Thr Ala  
515 520 525

Leu Leu Asp Ala Ala Gly Val Ala Ser Leu Leu Thr Thr Ala Glu Val  
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Val Val Thr Glu Ile Pro Lys Glu Glu Lys Asp Pro Gly Met Gly Ala  
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Met Gly Gly Met Gly Gly Gly Met Gly Gly Gly Met Phe  
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<210> 12  
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<212> PRT  
<213> Homo sapiens

<400> 12

Met Ala Cys Leu His Glu Thr Arg Thr Pro Ser Pro Ser Phe Gly Gly  
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Phe Val Ser Thr Leu Ser Glu Ala Ser Met Arg Lys Leu Asp Pro Asp  
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Thr Ser Asp Cys Thr Pro Glu Lys Asp Leu Thr Pro Thr His Val Leu  
35 40 45

Gln Leu His Glu Gln Asp Ala Gly Gly Pro Gly Gly Ala Ala Gly Ser  
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Pro Glu Ser Arg Ala Ser Arg Val Arg Ala Asp Glu Val Arg Leu Gln  
 65 70 75 80

Cys Gln Ser Gly Ser Gly Phe Leu Glu Gly Leu Phe Gly Cys Leu Arg  
 85 90 95

Pro Val Trp Thr Met Ile Gly Lys Ala Tyr Ser Thr Glu His Lys Gln  
 100 105 110

Gln Gln Glu Asp Leu Trp Glu Val Pro Phe Glu Glu Ile Leu Asp Leu  
 115 120 125

Gln Trp Val Gly Ser Gly Ala Gln Gly Ala Val Phe Leu Gly Arg Phe  
 130 135 140

His Gly Glu Glu Val Ala Val Lys Lys Val Arg Asp Leu Lys Glu Thr  
 145 150 155 160

Asp Ile Lys His Leu Arg Lys Leu Lys His Pro Asn Ile Ile Thr Phe  
 165 170 175

Lys Gly Val Cys Thr Gln Ala Pro Cys Tyr Cys Ile Leu Met Glu Phe  
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Cys Ala Gln Gly Gln Leu Tyr Glu Val Leu Arg Ala Gly Arg Pro Val  
 195 200 205

Thr Pro Ser Leu Leu Val Asp Trp Ser Met Gly Ile Ala Gly Gly Met  
 210 215 220

Asn Tyr Leu His Leu His Lys Ile Ile His Arg Asp Leu Lys Ser Pro  
 225 230 235 240

Asn Met Leu Ile Thr Tyr Asp Asp Val Val Lys Ile Ser Asp Phe Gly  
 245 250 255

Thr Ser Lys Glu Leu Ser Asp Lys Ser Thr Lys Met Ser Phe Ala Gly  
 260 265 270

Thr Val Ala Trp Met Ala Pro Glu Val Ile Arg Asn Glu Pro Val Ser  
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Glu Lys Val Asp Ile Trp Ser Phe Gly Val Val Leu Trp Glu Leu Leu  
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Thr Gly Glu Ile Pro Tyr Lys Asp Val Asp Ser Ser Ala Ile Ile Trp  
 305 310 315 320

Gly Val Gly Ser Asn Ser Leu His Leu Pro Val Pro Ser Ser Cys Pro  
 325 330 335

Asp Gly Phe Lys Ile Leu Leu Arg Gln Cys Trp Asn Ser Lys Pro Arg  
 340 345 350

Asn Arg Pro Ser Phe Arg Gln Ile Leu Leu His Leu Asp Ile Ala Ser  
 355 360 365

Ala Asp Val Leu Ser Thr Pro Gln Glu Thr Tyr Phe Lys Ser Gln Ala  
 370 375 380

Glu Trp Arg Glu Glu Val Lys Leu His Phe Glu Lys Ile Lys Ser Glu  
 385 390 395 400

Gly Thr Cys Leu His Arg Leu Glu Glu Glu Leu Val Met Arg Arg Arg  
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Glu Glu Leu Arg His Ala Leu Asp Ile Arg Glu His Tyr Glu Arg Lys  
 420 425 430

Leu Glu Arg Ala Asn Asn Leu Tyr Met Glu Leu Asn Ala Leu Met Leu  
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Gln Leu Glu Leu Lys Glu Arg Glu Leu Leu Arg Arg Glu Gln Ala Leu  
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Glu Arg Arg Cys Pro Gly Leu Leu Lys Pro His Pro Ser Arg Gly Leu  
 465 470 475 480

Leu His Gly Asn Thr Met Glu Lys Leu Ile Lys Lys Arg Asn Val Pro  
 485 490 495

Gln Lys Leu Ser Pro His Ser Lys Arg Pro Asp Ile Leu Lys Thr Glu  
 500 505 510

Ser Leu Leu Pro Lys Leu Asp Ala Ala Leu Ser Gly Val Gly Leu Pro  
 515 520 525

Gly Cys Pro Lys Ala Pro Pro Ser Pro Gly Arg Ser Arg Arg Gly Lys  
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Thr Arg His Arg Lys Ala Ser Ala Lys Gly Ser Cys Gly Asp Leu Pro  
 545 550 555 560

Gly Leu Arg Thr Ala Val Pro Pro His Glu Pro Gly Gly Pro Gly Ser  
 565 570 575

Pro Gly Gly Leu Gly Gly Gly Pro Ser Ala Trp Glu Ala Cys Pro Pro  
 580 585 590

Ala Leu Arg Gly Leu His His Asp Leu Leu Leu Arg Lys Met Ser Ser  
 595 600 605

Ser Ser Pro Asp Leu Leu Ser Ala Ala Leu Gly Ser Arg Gly Arg Gly  
 610 615 620

Ala Thr Gly Gly Ala Gly Asp Pro Gly Ser Pro Pro Pro Ala Arg Gly  
 625 630 635 640

Asp Thr Pro Pro Ser Glu Gly Ser Ala Pro Gly Ser Thr Ser Pro Asp  
 645 650 655

Ser Pro Gly Gly Ala Lys Gly Glu Pro Pro Pro Pro Val Gly Pro Gly  
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Glu Gly Val Gly Leu Leu Gly Thr Gly Arg Glu Gly Thr Ser Gly Arg  
 675 680 685

Gly Gly Ser Arg Ala Gly Ser Gln His Leu Thr Pro Ala Ala Leu Leu  
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Tyr Arg Ala Ala Val Thr Arg Ser Gln Lys Arg Gly Ile Ser Ser Glu  
 705 710 715 720

Glu Glu Glu Gly Glu Val Asp Ser Glu Val Glu Leu Thr Ser Ser Gln  
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Arg Trp Pro Gln Ser Leu Asn Met Arg Gln Ser Leu Ser Thr Phe Ser  
 740 745 750

Ser Glu Asn Pro Ser Asp Gly Glu Glu Gly Thr Ala Ser Glu Pro Ser  
 755 760 765

Pro Ser Gly Thr Pro Glu Val Gly Ser Thr Asn Thr Asp Glu Arg Pro  
770 775 780

Asp Glu Arg Ser Asp Asp Met Cys Ser Gln Gly Ser Glu Ile Pro Leu  
785 790 795 800

Asp Pro Pro Pro Ser Glu Val Ile Pro Gly Pro Glu Pro Ser Ser Leu  
805 810 815

Pro Ile Pro His Gln Glu Leu Leu Arg Glu Arg Gly Pro Pro Asn Ser  
820 825 830

Glu Asp Ser Asp Cys Asp Ser Thr Glu Leu Asp Asn Ser Asn Ser Val  
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Asp Ala Leu Arg Pro Pro Ala Ser Leu Pro Pro  
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